Recovery Plan Action Status

Plan Name: Recovery Plan for Insect and Plant Taxa from the Santa Cruz Mountains in California

Plan Status: Final Plan Date: 28-Sep-98 Lead Agency: USFWS

Lead Office: Ventura Fish And Wildlife Office 644-1766)

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Ben Lomond wallflower (Erysimum teretifolium), Mount Hermon June beetle (Polyphylla barbata), Zayante band-winged grasshopper (Trimerotropis infantilis), Ben Lomond spineflower (Chorizanthe pungens var. hartwegiana), Santa Cruz cypress (Cupressus abramsiana), Ohlone tiger beetle (Cicindela ohlone), Scotts Valley Polygonum (Polygonum (Polygonum (Polygonum), Robust (incl. Scotts Valley) spineflower (Chorizanthe robusta (incl. vars. robusta and hartwegii))	2	1.1.2	Develop HCP with County of Santa Cruz	Ongoing Not Current	FY 2000 - FY 2004		Santa Cruz County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Management: Planning, Other: Administration, Other: Regulations	Contract, Internal Administrative, Internal Technical Assistance	

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Ben Lomond wallflower (Erysimum teretifolium), Mount Hermon June beetle (Polyphylla barbata), Zayante band-winged grasshopper (Trimerotropis infantilis), Ben Lomond spineflower (Chorizanthe pungens var. hartwegiana), Ohlone tiger beetle (Cicindela ohlone), Scotts Valley Polygonum (Polygonum (Polygonum hickmanii), Robust (incl. Scotts Valley) spineflower (Chorizanthe robusta (incl. vars. robusta and hartwegii))	2	1.1.4	Establish conservation easements on other sites not covered by HCPs	Not Started	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, California Department of Fish and Game, Private landowners	Acquisition: Easement, Management, Other: Information and Education	Contract, Internal Administrative, Internal Technical Assistance	
Ohlone tiger beetle (Cicindela ohlone), Scotts Valley Polygonum (Polygonum hickmanii), Robust (incl. Scotts Valley) spineflower (Chorizanthe robusta (incl. vars. robusta and hartwegii))	1	1.1.5.1	Secure, protect and manage dry grassland in Scotts Valley	Partially Complete	FY 2009		To be determined, Private landowners	Acquisition	Contract, Internal Administrative, Internal Technical Assistance	1. Glenwood Open Space Preserve is now owned by the City of Scotts Valley and is being jointly managed with the Land Trust of Santa Cruz County. 2. Polo Ranch is the only property with an intact ecosystem for Scotts Valley polygonum. It should be acquired and managed as a preserve for endangered plants.

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Ben Lomond wallflower (Erysimum teretifolium), Mount Hermon June beetle (Polyphylla barbata), Zayante band-winged grasshopper (Trimerotropis infantilis), Ben Lomond spineflower (Chorizanthe pungens var. hartwegiana), Ohlone tiger beetle (Cicindela ohlone), Scotts Valley Polygonum (Polygonum hickmanii), Robust (incl. Scotts Valley) spineflower (Chorizanthe robusta (incl. vars. robusta and hartwegii))	2	1.1.6	Secure & protect medium-priority sandhill parklands and northern maritime chaparral	Ongoing Current	FY 2000 - FY 2004		To be determined	Acquisition, Management, Other: Information and Education	Contract, Internal Administrative, Internal Technical Assistance	
Ben Lomond wallflower (Erysimum teretifolium), Mount Hermon June beetle (Polyphylla barbata), Zayante band-winged grasshopper (Trimerotropis infantilis), Ben Lomond spineflower (Chorizanthe pungens var. hartwegiana), Santa Cruz cypress (Cupressus abramsiana), Ohlone tiger beetle (Cicindela ohlone), Scotts Valley Polygonum (Polygonum hickmanii), Robust (incl. Scotts Valley) spineflower (Chorizanthe robusta (incl. vars. robusta and hartwegii))	3	2.1.1	Control invasion of nonnative plants	Ongoing Current	FY 1995 - FY 1999		California Department of Fish and Game, California Department of Forestry and Fire Protection, Private landowners	Management: Habitat Maintenance and Manipulation, Other: Information and Education	Contract, Internal Technical Assistance, Volunteer	

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Ben Lomond wallflower (Erysimum teretifolium), Mount Hermon June beetle (Polyphylla barbata), Zayante band-winged grasshopper (Trimerotropis infantilis), Ben Lomond spineflower (Chorizanthe pungens var. hartwegiana), Ohlone tiger beetle (Cicindela ohlone), Scotts Valley Polygonum (Polygonum (Polygonum inckmanii), Robust (incl. Scotts Valley) spineflower (Chorizanthe robusta (incl. vars. robusta and hartwegii))	3	2.1.2	Reduce encroachment of woody taxa	Ongoing Current	FY 1995 - FY 1999		California Department of Fish and Game, California Department of Forestry and Fire Protection, Private landowners	Management: Habitat Maintenance and Manipulation, Other: Information and Education	Contract, Internal Technical Assistance, Volunteer	
Ben Lomond wallflower (Erysimum teretifolium), Mount Hermon June beetle (Polyphylla barbata), Zayante band-winged grasshopper (Trimerotropis infantilis), Ben Lomond spineflower (Chorizanthe pungens var. hartwegiana), Ohlone tiger beetle (Cicindela ohlone), Scotts Valley Polygonum (Polygonum hickmanii), Robust (incl. Scotts Valley) spineflower (Chorizanthe robusta (incl. vars. robusta and hartwegii))	2	2.1.3	Reduce erosion and soil compaction	Ongoing Not Current	FY 1995 - FY 1999		California Department of Fish and Game, Private landowners	Management, Other: Information and Education, Research: Other Information	Contract, Internal Administrative, Internal Technical Assistance	

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Ben Lomond wallflower (Erysimum teretifolium), Mount Hermon June beetle (Polyphylla barbata), Zayante band-winged grasshopper (Trimerotropis infantilis), Ben Lomond spineflower (Chorizanthe pungens var. hartwegiana), Ohlone tiger beetle (Cicindela ohlone), Scotts Valley Polygonum (Polygonum hickmanii), Robust (incl. Scotts Valley) spineflower (Chorizanthe robusta (incl. vars. robusta and hartwegii))	2	2.1.4	Reduce impacts from recreation	Ongoing Not Current	FY 1995 - FY 1999		California Department of Fish and Game, Private landowners	Management, Other: Information and Education, Research: Other Information	Contract, Internal Administrative, Internal Technical Assistance	
Mount Hermon June beetle (Polyphylla barbata), Zayante band-winged grasshopper (Trimerotropis infantilis), Ohlone tiger beetle (Cicindela ohlone)	3	2.1.5	Limit use of insecticides	Not Started			U.S. Department of Agriculture, California Department of Fish and Game, Private landowners	Management: Habitat Maintenance and Manipulation, Other: Information and Education	Graduate Student, Internal Technical Assistance, Species Expert	

Ben Lomond wallflower (Erysimum teretifolium), Mount Hermon June beetle (Polyphylla barbata), Zayante band-winged grasshopper (Trimerotropis infantilis), Ben Lomond spineflower	Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
(Chorizanthe pungens var. hartwegiana), Santa Cruz cypress (Cupressus abramsiana), Ohlone tiger beetle (Cicindela ohlone), Scotts Valley Polygonum (Polygonum hickmanii), Robust (incl. Scotts Valley) spineflower (Chorizanthe	vallflower Erysimum erretifolium), Mount Hermon June heetle (Polyphylla harbata), Zayante harbata), Zayante harbata), Zayante harbata), Zayante harbata), Ben harbata), Ben harbata), Ben harbata), Ben harbata) h	3	2.1.6		Not Started			Department of Fish and Game, Private	Habitat Maintenance and Manipulation, Other: Information	Internal Technical Assistance,	

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Ben Lomond wallflower (Erysimum teretifolium), Mount Hermon June beetle (Polyphylla barbata), Zayante band-winged grasshopper (Trimerotropis infantilis), Ben Lomond spineflower (Chorizanthe pungens var. hartwegiana), Santa Cruz cypress (Cupressus abramsiana), Ohlone tiger beetle (Cicindela ohlone), Scotts Valley Polygonum hickmanii), Robust (incl. Scotts Valley) spineflower (Chorizanthe robusta (incl. vars. robusta and hartwegii))	3	2.3.1	Establish private landowner working group	Ongoing Current	FY 1995 - FY 1999			Other: Information and Education	Internal Technical Assistance, Volunteer	
Ben Lomond wallflower (Erysimum teretifolium), Mount Hermon June beetle (Polyphylla barbata), Zayante band-winged grasshopper (Trimerotropis infantilis), Ben Lomond spineflower (Chorizanthe pungens var. hartwegiana), Ohlone tiger beetle (Cicindela ohlone), Scotts Valley Polygonum (Polygonum hickmanii), Robust (incl. Scotts Valley) spineflower (Chorizanthe robusta (incl. vars. robusta and hartwegii))	2	3.1	Conduct research on life histories	Ongoing Current	FY 1995 - FY 1999		University of California, Santa Cruz, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research	Contract, Graduate Student, Species Expert	

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Mount Hermon June beetle (Polyphylla barbata), Zayante band-winged grasshopper (Trimerotropis infantilis), Ohlone tiger beetle (Cicindela ohlone)	2	3.2	Conduct distribution surveys for insectes	Ongoing Not Current	FY 1995 - FY 1999		University of California, Santa Cruz, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Habitat Status, Research: Population Surveys	Contract, Graduate Student, Species Expert	
Mount Hermon June beetle (Polyphylla barbata), Zayante band-winged grasshopper (Trimerotropis infantilis), Ohlone tiger beetle (Cicindela ohlone)	2	3.3	Conduct research on habitat requirements	Ongoing Current	FY 1995 - FY 1999		University of California, Santa Cruz, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Habitat Requirements	Contract, Graduate Student, Species Expert	Graduate student Tara Cornelisse is working on a Ph.D. dissertation studying habitat characteristics and conservation genetics of OTB.
Ben Lomond wallflower (Erysimum teretifolium), Mount Hermon June beetle (Polyphylla barbata), Zayante band-winged grasshopper (Trimerotropis infantilis), Ben Lomond spineflower (Chorizanthe pungens var. hartwegiana), Santa Cruz cypress (Cupressus abramsiana), Ohlone tiger beetle (Cicindela ohlone), Scotts Valley Polygonum (Polygonum hickmanii), Robust (incl. Scotts Valley) spineflower (Chorizanthe robusta (incl. vars. robusta and	2	3.5	Conduct population monitoring	Ongoing Current	FY 1995 - FY 1999		University of California, Santa Cruz, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Contract, Graduate Student, Species Expert	

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Ben Lomond wallflower (Erysimum teretifolium), Mount Hermon June beetle (Polyphylla barbata), Zayante band-winged grasshopper (Trimerotropis infantilis), Ben Lomond spineflower (Chorizanthe pungens var. hartwegiana), Ohlone tiger beetle (Cicindela ohlone), Scotts Valley Polygonum (Polygonum hickmanii), Robust (incl. Scotts Valley) spineflower (Chorizanthe robusta (incl. vars. robusta and hartwegii))	2	4	Locate additional habitat/populations	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Habitat Status, Research: Population Surveys	Contract, Graduate Student, Species Expert	
Ben Lomond wallflower (Erysimum teretifolium), Mount Hermon June beetle (Polyphylla barbata), Zayante band-winged grasshopper (Trimerotropis infantilis), Ben Lomond spineflower (Chorizanthe pungens var. hartwegiana), Santa Cruz cypress (Cupressus abramsiana), Ohlone tiger beetle (Cicindela ohlone), Scotts Valley Polygonum (Polygonum (Polygonum inckmanii), Robust (incl. Scotts Valley) spineflower (Chorizanthe robusta (incl. vars. robusta and hartwegii))		5.1	Develop educational materials	Ongoing Current	FY 1995 - FY 1999			Other: Information and Education	Graduate Student, Internal Technical Assistance, Species Expert	

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Ben Lomond wallflower (Erysimum teretifolium), Mount Hermon June beetle (Polyphylla barbata), Zayante band-winged grasshopper (Trimerotropis infantilis), Ben Lomond spineflower (Chorizanthe pungens var. hartwegiana), Santa Cruz cypress (Cupressus abramsiana), Ohlone tiger beetle (Cicindela ohlone), Scotts Valley Polygonum (Polygonum (Polygonum inckmanii), Robust (incl. Scotts Valley) spineflower (Chorizanthe robusta (incl. vars. robusta and hartwegii))	3	5.2	Implement education program	Not Started				Other: Information and Education	Contract, Internal Technical Assistance, Volunteer	
Ben Lomond wallflower (Erysimum teretifolium), Mount Hermon June beetle (Polyphylla barbata), Zayante band-winged grasshopper (Trimerotropis infantilis), Ben Lomond spineflower (Chorizanthe pungens var. hartwegiana), Ohlone tiger beetle (Cicindela ohlone), Robust (incl. Scotts Valley) spineflower (Chorizanthe robusta (incl. vars. robusta and hartwegii))	3	6.1	Refine recovery criteria	Not Started			U.S. Fish and Wildlife Service	Other: Administration, Research	Graduate Student, Internal Technical Assistance, Species Expert	

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Ben Lomond wallflower (Erysimum teretifolium), Mount Hermon June beetle (Polyphylla barbata), Zayante band-winged grasshopper (Trimerotropis infantilis), Ben Lomond spineflower (Chorizanthe pungens var. hartwegiana), Santa Cruz cypress (Cupressus abramsiana), Ohlone tiger beetle (Cicindela ohlone), Scotts Valley Polygonum (Polygonum hickmanii), Robust (incl. Scotts Valley) spineflower (Chorizanthe robusta (incl. vars. robusta and hartwegiii))	3	6.2	Update management guidelines	Not Started			U.S. Fish and Wildlife Service	Other: Administration, Research	Species Expert	Based on the results of studies, Ohlone tiger beetle expert, Dick Arnold has drafted a management reportitled: Review of Historical and Current Land Use Practices, Characte ization of Suitable Habitat, and Habitat Management Recommendations for the Endangered Ohlone Tiger Beetle, Cicindela ohlone (Coleoptera Cicindelidae). This is an unpublished report in draft form as of 8/5/11.